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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,950	01/09/2002	Wilfred F. Brake	100110176-1	6376
7590 10/20/2005			EXAMINER	
HEWLETT-PACKARD COMPANY			DO, ANH HONG	
Intellectual Property Administration			ART UNIT	
P.O. Box 272400			PAPER NUMBER	
Fort Collins, CO 80527-2400			2627	
DATE MAILED: 10/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/043,950

Applicant(s)

BRAKE ET AL.

Examiner

ANH H. DO

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 7 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-17 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/2/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Queiroz et al. (U.S. Patent No. 6,058,210) in view of Wise (U.S. Patent No. 5,784,631) and Ferguson (U.S. Patent No. 6,052,555).

Regarding claim 1, Queiroz discloses:

- configuring a JPEG engine and performing JPEG processing on an uncompressed digital image to produce byte-aligned data, and reading this data (col. 7, lines 59-62, teaching an optional resource defined by JPEG comprising a specific and byte-aligned sequence of bits, and implicitly read to be inserted into the compressed bit stream).

Queiroz does not disclose expressly encoding DCT coefficients in a byte-aligned manner and converting the JPEG data to MPEG data.

Wise discloses producing JPEG data in which DCT coefficients are encoded in a byte-aligned manner (col. 130, lines 25-42).

And Ferguson discloses converting the JPEG data to MPEG data by transmitting different groups of JPEG compressed frame data to different processors for MPEG processing (col. 10, lines 1-3).

Queiroz & Wise & Ferguson are combinable because they are from JPEG encoding method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to produce JPEG data encoding DCT coefficients in a byte-aligned manner and to convert the JPEG data to MPEG data in Queiroz as taught by Wise and Ferguson.

The suggestion/motivation for doing so would have been to accomplish the encoding and decoding process that can reduce bandwidth non-constraint on the distribution network and facilitating and speeding the MPEG compression using JPEG (Wise, see Abstract).

Therefore, it would have been obvious to combine Queiroz with Wise and Ferguson to obtain the invention as specified in claim 1.

Regarding claim 2, Ferguson teaches storing the MPEG data in an MPEG file to archival storage 54 (col. 5, lines 1-3).

Regarding claim 3, Queiroz teaches adding file header information to the MPEG file (col. 10, lines 41-43, teaching initializing a header in the MPEG file by a 4-byte sequence).

Regarding claim 4, Wise teaches JPEG engine is accomplished by specifying table generating values that are used by JPEG engine to generate Huffman code tables (col. 151, lines 16-19).

Regarding claim 5, Wise teaches providing Huffman code tables Wise discloses producing JPEG data in which DCT coefficients are encoded in a byte-aligned manner (col. 130, lines 25-42) and converting JPEG standard data to MPEG data (col. 6, lines 63-67).

Regarding claim 8, Queiroz discloses:

- means for obtaining an uncompressed digital image (Fig. 1 shows a data compression system 4 for obtaining uncompressed digitized video signals);
- means for performing and configuring the JPEG processing to produce a byte-aligned data stream (col. 7, lines 59-62, teaching an optional resource defined by JPEG comprising a specific and byte-aligned sequence of bits).

Queiroz does not disclose expressly means for encoding DCT coefficients in a byte-aligned manner and means for converting the JPEG data to MPEG data.

Wise discloses means for producing JPEG data in which DCT coefficients are encoded in a byte-aligned manner (col. 130, lines 25-42).

And Ferguson discloses means for converting the JPEG data to MPEG data by transmitting different groups of JPEG compressed frame data to different processors for MPEG processing (col. 10, lines 1-3).

Queiroz & Wise & Ferguson are combinable because they are from JPEG encoding method.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to produce JPEG data encoding DCT coefficients in a byte-aligned manner and to convert the JPEG data to MPEG data in Queiroz as taught by Wise and Ferguson.

The suggestion/motivation for doing so would have been to accomplish the encoding and decoding process that can reduce bandwidth non-constraint on the distribution network and facilitating and speeding the MPEG compression using JPEG (Wise, see Abstract).

Therefore, it would have been obvious to combine Queiroz with Wise and Ferguson to obtain the invention as specified in claim 8.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9-17 and 19-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Wise (US. Patent No. 5,784,631).

Regarding claims 9, 10, 11 and 12, Wise discloses Huffman tables for encoding JPEG DC coefficients, each Huffman code representing a range of magnitudes for a Dc coefficient, each Huffman code to be used with a following bit

pattern that encodes which of range of magnitudes represents the value of the DC coefficient, the combined lengths of each Huffman code and corresponding bit pattern being an integer multiple of 8 bits (col. 128, lines 26-28 and col. 151, lines 17-27).

Regarding claims 13 and 14, Wise discloses a lookup table that correlates byte-aligned JPEG AC and DC and following bits with equivalent MPEG AC and DC coefficient codes (Fig. 80, shows equivalence between JPEG and MPEG codes; and col. 151, lines 17-27 teaching AC and DC coefficient codes).

Regarding claim 15, Wise discloses a JPEG engine to produce JPEG compliant data comprising bit patterns that encode DCT coefficients (col. 130, lines 25-42), each bit pattern that encodes a DCT coefficient having a length that is an integer multiple of eight bits (col. 128, lines 26-28).

Regarding claim 16, Wise teaches a Huffman code (col. 151, lines 17-27).

Regarding claim 17, Wise teaches each bit pattern encoding non-zero DCT coefficients comprises a set of one or more following bits (col. 132, lines 28-30, teaching a non-zero value followed by a start code).

Regarding claim 19, Wise teaches JPEG software implementations (col. 154, lines 37-39).

Regarding claim 20, Wise teaches the JPEG data has a length that is an integer multiple of eight bits (col. 128, lines 26-28).

Regarding claim 21, Wise teaches producing the JPEG data (col. 130, lines 25-42).

Regarding claim 22, Wise teaches encoding a run/value combination comprising Huffman code (col. 5, lines 57-64) and a following bit pattern that encodes a value for an AC DCT coefficient (col. 151, lines 17-27 teaching AC and DC coefficient codes).

Regarding claim 23, Wise teaches each non-zero DC DCT coefficient is encoded by a bit pattern having a length that is an integer multiple of eight bits (col. 151, lines 17-27 teaching AC and DC coefficient codes).

Regarding claim 24, Wise teaches a lookup table that correlates byte-aligned JPEG AC and DC and following bits with equivalent MPEG AC and DC coefficient codes ((Fig. 80, shows equivalence between JPEG and MPEG codes; and col. 151, lines 17-27 teaching AC and DC coefficient codes).

***Allowable Subject Matter***

6. Claims 6 and 7 are allowed.
7. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding independent claim 6, the prior art, taken either singly or in combination, does not teach:

- a logic unit adapted to configure the JPEG engine... aligned manner and convert... MPEG I-frame.

Regarding claim 7, since it depends from claim 6, it is also allowable for the

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same reason.

Regarding claim 18, the prior art, taken either singly or in combination, does not teach:

- providing a table... MPEG format; and indexing into the table, using a bit pattern produced by the JPEG engine, in order to locate the corresponding MPEG pattern.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K. MOORE can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 17, 2005



**ANH HONG DO  
PRIMARY EXAMINER**